FINAL
ENVIRONMENTAL IMPACT ASSESSMENT

for

JOINT CANNERY OUTFALL PROJECT
PAGO PAGO HARBOR
AMERICAN SAMOA

by

StarKist Samoa, Inc.
and
Samoa Packing Co.

Prepared for

ECONOMIC DEVELOPMENT PLANNING OFFICE
AMERICAN SAMOA COASTAL MANAGEMENT PROGRAM

Prepared by

CH2M HILL
6425 Christie Ave
Emeryville, CA 94608
(415) 652-2426

October 1991

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CH2M HILL Engineers Planners Economists Scientists

October 28, 1991

PDX30702.PA.EA

Project Notification and Review System
American Samoa Coastal Management Program
Economic Development Planning Office
American Samoa Government
Pago Pago, American Samoa 96799

Attention: Mr. Lelei Peau, Manager
Coastal Management Program

Subject: Final Environmental Impact Assessment
Joint Cannery Outfall
Pago Pago, Harbor

Enclosed is the FEIA for the Joint Cannery Outfall. As we discussed in September, this document includes the DEIA by reference and provides responses to all comments received on the DEIA. There were no comments that resulted in a change in the proposed project. Most comments required clarification only. No new information was generated or is presented in the FEIA.

Some material from documents referenced in the DEIA is provided to clarify certain response to a limited number of the comments. This material was taken from the Feasibility Study, the Use Attainability Study, and the Mixing Zone Application and Technical Support Document. All of these sources are described in the DEIA.

Additional coordination and consultation was developed with the Harbor Master's Office, the Director of Port Administration, the Department of Wildlife and Marine Resources, and the Department of Public Works. These efforts were made to respond to specific comments as indicated in the FEIA. The contacts resulted in no changes in the project and only some minor adjustments in the construction activities in and around the park.

CH2M HILL San Francisco Office 6425 Christie Avenue, Suite 500 Emeryville, CA 94608 415.652.2426 Fax 415.652.0482

We believe that the Environmental Impact Assessment process has been successfully completed and has provided all of the technical information necessary for the decision making process involved in the issuance of permits. Construction of the pipeline in the harbor can begin with the issuance of the Land Use and Building Permit and the Corps of Engineers permit. A water quality certification (for construction) and a park activity permit have been issued. The Corps of Engineers permit can be issued as soon as the coastal consistency certification is issued.

As you know the schedule for completion of the joint cannery outfall is constrained by the consent agreement between the canneries and the American Samoa Government. We appreciate your attention to the remaining Land Use and Building permit and Coastal Consistency certification as soon as possible.

Please call on us for any assistance we can provide. Thank you for your time and consideration of this matter.

Sincerely,

CH2M HILL

Steven L. Costa
Project Manager (Environmental and Permitting)

Enclosure: FEIA

cc: distribution list of DEIA

CONTENTS

1. EXECUTIVE SUMMARY

This Final Environmental Impact Assessment (FEIA) has been prepared to document the compliance with environmental regulations by the Joint Cannery Outfall project in Pago Pago Harbor, American Samoa. The Joint Cannery Outfall is proposed to replace the existing outfalls in the inner harbor. The new outfall will discharge treated wastewater approximately 7000 feet closer to the harbor mouth than the existing outfalls. The new outfall, with a multiport diffuser, and with the granting of a zone of mixing, will result in compliance with water quality standards in Pago Pago Harbor.

The outfall design incorporates a number of mitigation measures to minimize environmental impacts during construction. The outfall will be an unburied, high density polyethylene pipeline along a completely submarine route. No dredging, trenching, or filling will be required for the pipeline placement. A small staging area in Pago Pago Park is proposed for the few months for construction.

The outfall design, the proposed mitigation measures, and the environmental impacts of the project are described in the Draft Environmental Impact Report (DEIA) of August 1991 and the documents included in the DEIA by reference. The FEIA includes the DEIA by reference and provides the additional following information:

- A brief project purpose and description (summarized from the DEIA for convenience of the reader) and a description of the organization of the FEIA
- Reproduction of the comments received by the American Samoa Economic Development Planning Office through the Project Notification Review System and the responses to those comments
- An update to the consultation and coordination section of the DEIA

A total of six letters or lists of comments was received from the Project Review Notification System agencies with 52 comments for which responses were prepared. The public comment period closed September 6th, 1991 following the first public hearing. However, a second public meeting was held to address specific concerns of the villages closest to the discharge location and responses were prepared for comments that were received until October 2, 1991. The letters essentially reflect the issues discussed at the public hearings. There appear to be no outstanding or unresolved issues that have not been adequately addressed by the DEIA or the FEIA response to comments. Sufficient information and public input has been compiled in order for decisions to be made regarding project permitting.

2. INTRODUCTION

This section of the Final Environmental Impact Assessment (FEIA) is intended to provide a brief summary of the project, formalize the inclusion of the Draft Environmental Impact Assessment (DEIA) by reference, summarize the sources of the comments on the DEIA that are responded to in the following section, and outline the organization and objective of the FEIA.

2.1 BACKGROUND

The American Samoa Water Quality Standards (ASWQS) require that the waters within Pago Pago Harbor that receive the wastewater discharged from the StarKist Samoa and Samoa Packing Company canneries must not exceed specified contaminant concentration limits. These standards require that median values not exceed 0.2 mg/l for total nitrogen (TN) and 0.03 mg/l for total phosphorus (TP).

The canneries discharge treated wastewater into Pago Pago Harbor. The effluent is treated by dissolved air flotation with chemical precipitation. In addition the canneries have implemented high-strength waste segregation. However, to comply with the ASWQS the canneries propose to replace the existing outfalls with a single joint outfall. The discharge location will move from the inner harbor to the outer harbor and a multiport diffuser will be added to the outfall. A mixing zone will be required in order to meet ASWQS.

The present waste load from the combined discharge of the StarKist and Samoa Packing canneries has been significantly reduced because of the canneries' implementation of high-strength waste segregation and open-ocean disposal of such wastes. The high-strength waste segregation operations began in August 1990. The resulting nutrient loading reduction was estimated to be about 50 to 60 percent of the total presegregation waste loads of TN and 20 to 30 percent of TP.

The suite of alternatives considered for wastewater treatment and disposal was comprehensive and is summarized in Section 3 of the DEIA. The selected alternative included the presently implemented DAF and high-strength waste segregation and the relocation of the discharge location. The final selection of the preferred alternative was a selection of outfall design and effluent discharge location.

The proposed joint cannery outfall consists of an unburied marine pipeline located on the bottom of Pago Pago Harbor. The cannery pipeline will convey the wastewater effluent from the canneries to a location approximately 7000 feet toward the seaward end of the harbor (as measured along the centerline of the harbor). The total length of pipeline is approximately 8400 feet. The outfall will terminate with a multiport diffuser in about 180 feet of water.

The proposed outfall pipeline will originate on land at the same location as the existing cannery outfalls. The pipeline will be attached to an existing dock and enter the harbor at the terminus of the dock fronting the canneries. It will be placed unburied on the bottom of the harbor so that dredging or filling will not be necessary. Where the pipeline crosses the entrance to the Trading Point cove in a water depth of about 40 feet it will be covered with pre-cast semi-circular concrete sections for protection from anchor damage.

From Trading Point seaward the pipeline will be placed approximately parallel to the coral reef in water depths between 60 and 180 feet. The pipeline will follow along the coral reef easterly between Trading Point and the Pago Pago Harbor navigation range line. The pipeline will then approximately follow the harbor navigation range line until reaching the diffuser area between Ava Point and Anasosopo Point.

The pipeline will terminate offshore of the coral reef in about 180 feet of water. The diffuser will be located east of the Pago Pago Harbor navigation range line to avoid interference with vessel traffic and anchorage. The diffuser configuration is based on modeling results using published EPA guidance and EPA published hydrodynamic models UMERGE and UDKHDEN. The diffuser design provides maximum feasible initial dilution at desired locations in the harbor and is configured to maintain a plume trapped below the surface.

The requested zone of mixing is located offshore of the eastern shoreline of the harbor between Anasosopo Point and Ava Point. The analysis of mixing zone size was based on worst case conditions. The dimension requested is bounded by a circle centered on the midpoint of the diffuser 1300 feet in radius or by the 30 foot contour whichever is closest to the center of the diffuser.

2.2 RELATIONSHIP TO DEIA

This FEIA includes the DEIA by reference. The purpose of the FEIA is to respond to comments on the DEIA. The comment letters and lists were compiled by the American Samoa Economic Development Planning Office. A total of six letters/lists was received with a total of 52 comments. The sources of the comments on the DEIA are described in Table 3-1 below. All references cited in this FEIA are found in the References (Section 6) of the DEIA.

2.3 FEIA ORGANIZATION

This FEIA is organized into an Executive Summary (Section 1) and three additional primary sections. This section provides a brief description of the project. Section 3 is the main part of the FEIA and presents the comments on the DEIA and the responses to those comments. Section 4 is a brief update on the ongoing coordination and consultation required and carried out as a part of the project permitting.

3. RESPONSE TO COMMENTS

This section of the FEIA presents responses to comments on the DEIA. The format used is intended to facilitate the easy identification of: the source of comments, the content of comments, and responses to specific comments. The comment letters (or lists) are summarized above in Table 2-1. Each section below addresses one letter (or list); for example Section 3.1 addresses letter number one in Table 2-1. The letter is reproduced as received with comment numbers added to the margin, the extent of the comment, as responded to, is indicated by the vertical bar in the margin. Each comment identified in the margin has a specific response assigned to it. As an example comment 1-5 refers to the marginal indication of 5 in letter number 1 and is addressed in the response to comment 1-5.

Table 3-1. COMMENT LETTERS

LETTER (OR LIST) NUMBER	NUMBER OF COMMENTS	AUTHOR AND DATE OF LETTER	ORIGINATING GROUP OR AGENCY
1	10	Lelei Peau Oct 2, 1991	American Samoa Economic Development Planning Office for the Project Notification Review System
2	21	Sheila Wiegman Sept 5, 1991	American Samoa Environmental Protection Agency (comments from Public Hearing)
3	5	Pati Faiai Sept 16, 1991	American Samoa Environmental Protection Agency
4	6	Michael Dworsky Sept 6, 1991	American Samoa Power Authority
5	3	Henry Sesepasara Sept 11, 1991	American Samoa Dept. of Marine and Wildlife Resources
6	7	Silila Patane Sept 16, 1991	American Samoa Dept. of Port Administration Harbormaster's Office

3.1 COMMENTS AND RESPONSES FOR LETTER NUMBER 1

American Samoa Economic Development Planning Office
for the
Project Notification Review System Committee

AMERICAN SAMOA GOVERNMENT
PAGO PAGO, AMERICAN SAMOA 96799
ECONOMIC DEVELOPMENT PLANNING OFFICE

In reply refer to:
ECD/CZM:
SERIAL#0011

October 2, 1991

Mr. Steven L. Costa
Project Manager
CH2M Hill
6425 Christie Avenue, Suite 500
Emeryville, CA 94608

RE: Comments on Draft EIA: Joint Cannery Outfall, Pago Pago Harbor

Dear Mr. Costa:

This letter follows your FAX Memorandum dated September 27, 1991 regarding the status of the Joint Cannery Outfall Environmental Review and Permitting process. I hereby transmit comments from the Project Notification Review System (PNRS) agencies involved in the EIA review. These agencies include the Department of Port Administration, the Department of Marine and Wildlife Resources, the American Samoa Power Authority, the Department of Parks and Recreation, the American Samoa Environmental Protection Agency, and the Economic Development Planning Office. In addition, two public hearings were conducted in American Samoa to solicit comments from the general public. The PNRS Committee hereby submits the following comments:

(1) Mixing Zone:

1 The Final EIA needs to incorporate traditional fishing experience by the villagers in addition to the other criteria already described for the proposed mixing zone. In the event of a water quality violation with the new pipeline, will the two canneries share responsibility (and consequences) for the violation? (Although this issue will ultimately be decided upon by the appropriate regulatory agencies and incorporated into permit decisions, would the pipeline owners at this time like to offer their advanced proposal for resolution of future water quality violations, as such may facilitate issuance of permits?)

2

(2) Staging Area and Construction-Related Impacts:

3 Is the park soil sufficiently compacted to handle the weight of the pipes and transport vehicles? Are the existing paved public roads able to handle the weight of same during transport? Will traffic in the park area be impacted, and what means of traffic control and signage will be used to minimize traffic jams?

4

5

6 The Final EIA should detail a transportation plan and schedule for hauling the pipes from the main dock to the staging area. The plan shall include close coordination with DPW on road conditions.

7 Will the two canneries' operations be disrupted during the construction phase? If so, in what manner and how will impacts be mitigated?

(3) Operational Impacts:

8 How will the pipeline be monitored (inspected) and maintained? Who will be responsible and what is involved in periodic inspection? What is the contingency plan
9 for a break in the pipeline? How and by whom will repairs be made? Is the necessary equipment for all of the above on-island?

(4) Anchoring of the pipeline:

10 The Port Administration has submitted comments (attached) regarding the actual location of the pipeline with respect to potential anchorage impacts. The Final EIA must provide written verification that close coordination with the Port Administration has in fact already occurred, which shall include an agreement on all issues regarding the responsibility for pipeline anchorage and insurance that it comes to rest along the designated contour.

Additional comments from other agencies are also attached.

Thank you for allowing the PNRS to comment on the proposed cannery pipeline. We look forward to reviewing the Final EIA. Upon receipt of the Final EIA, the American Samoa Coastal Management Program will render a decision on the federal consistency determination. In addition, a meeting will be convened of the PNRS Committee to render a decision on the Land Use Permit. If you have any questions regarding any of these comments or procedures, please do not hesitate to contact either myself or Richard Volk at (684) 633-5155.

Sincerely,

Lelei Peau, Chairman
Project Notification Review System

cc: Norman Wei, Start Kist Samoa Seafood Company
James Cox, Van Camp Seafood Company (Samoa Packing)
Dyke Coleman, Chairman, EQC
Pati Fai'ai, Sheila Wiegman, ASEPA
John Faumuina, Richard Volk, EDPO
Tula Solaita, David Herdrich, DPR
Maurice Callaghan, Starkist Samoa, Inc.
Michael Macready, Samoa Packing Company
Leroy Ledoux, Silila Patane, Port Administration
Henry Sesepasara, DMWR
Abe Malae, Mike Dworsky, ASPA
Virginia Gibbons, AGO

Response to Comment 1-1

Shoreline fishing experience in Pago Pago Harbor was discussed in the *Use Attainability Analysis and Site-Specific Criteria Analysis* (CH2M HILL 1991). That information was summarized in the DEIA (Section 4.1.2.1). Some of the information is reiterated below, for the readers convenience, and the implications of the location and size of the mixing zone are then discussed.

The American Samoa Department of Marine and Wildlife Resources (DMWR) is conducting an inshore sampling program. However, the data collected were not available at the time of the preparation of the Use Attainability Analysis. DMWR did provide a qualitative summary of observations to date for Pago Pago Harbor (DMWR 1991) which is given in the Use Attainability Analysis.

The American Samoa Office of Marine Resources conducted a survey of 13 shoreside villages on Tutuila Island in 1978 to 1980 to document current fishing practices and the resultant catch (Wass, undated). This study measured fishing effort exerted and catches of fish and invertebrates made by subsistence and recreational fishermen on the fringing reef or shortly beyond. Six of these villages were located in Pago Pago Harbor. The results of this survey are summarized in the Use Attainability Analysis (Table 4, page 15). The data used in the 1978 to 1980 Shoreline Fishery Survey appear to have been from the reef area defined as within the 8-meter (26-foot) isobath.

The Corps of Engineers Coral Reef Inventory (COE 1981) also qualitatively summarized the shoreline fishery of Pago Pago Harbor. General observations regarding the Inner, Middle, and Outer Harbor areas in this report are given in the Use Attainability Study and the DEIA.

Sections 4.2.1.2 and 4.2.2.2 of the DEIA indicate no short or long term impacts to fisheries or water quality from the proposed project. There is no anticipated impact on the traditional fishing practices or the catch per unit effort due to the location of the mixing zone. The following points are of particular importance to this issue:

- The plume will remain submerged below the depth of traditional fishing activities most of the time. When conditions are such that the plume surfaces the initial dilution is higher than for a submerged plume and the mixing zone will not be shoreward of the 30-foot contour.

- At any given time the actual area exceeding water quality standards is much smaller than the area of the mixing zone described in the DEIA. The actual area of the "effective" mixing zone that will exceed water quality standards under average conditions is less than 5 percent of the total mixing zone area shown in Figure 3-5 of the DEIA.

- Water quality (in terms of nutrient concentrations) is actually predicted to improve in the area around the diffuser location, outside of the effective mixing zone, in response to the combination of high strength waste segregation and the relocation of the outfall. [Based on historical data for water quality sample stations 8 and 8A.]

Response to Comment 1-2

Preliminary discussions with the U.S. Environmental Protection Agency (USEPA) have already been held on this point. Each cannery will be required to have individual NPDES permits. Monitoring will be required of each cannery's effluent. If a water quality violation occurs and there is clear evidence that one of the canneries is at fault the violation will be ascribed to that cannery. If it cannot be ascertained that one of the canneries is at fault then the violation will be ascribed to both.

The canneries will be developing an agreement for the operation of the joint outfall (examples of existing agreements are available as models). This agreement will address the question of permit violations. However, until draft permits are issued by USEPA and a mixing zone permit is written by American Samoa Environmental Quality Commission, a final agreement between the canneries cannot be established.

Response to Comment 1-3

The area of the park proposed as a staging area is low lying and is the site of a previous landfill. The design engineering firm and potential contractors have examined the site. Some filling may be required (DEIA, Section 3.1.4.2). The pipe is not heavy and does not require extremely large or heavy equipment to move it. The pipe is manufactured in 40-foot sections which two men can lift and move. The park will be revegetated and returned to its original (or better) condition after pipeline construction is finished. Mr. Andy Smith of the American Samoa Department of Public Works (DPW) has requested that the contractor coordinate the placement of fill with ASEPA and DMWR and have the fill plan reviewed and approved by DMWR (personal communication, 9 October 1991).

Response to Comment 1-4

As stated in the response to Comment 1-3, the pipe is not heavy (16-inch diameter HDPE) and its transportation will not result in extraordinary load weights for public roads.

Response to Comment 1-5

Impacts on traffic will be negligible. Approximately 6 to 10 truck trips will be needed to move the pipe and all associated equipment and supplies to the park over a

2-day period. Approximately 80 loads of fill may be required over about a week to 10 days. During the time that concrete is delivered to the staging area for the fabrication of collar weights there will be only one (at most two) concrete truck deliveries per day. Peak hour traffic (2-way count) in the vicinity of the park is 500 vehicles per hour at Korea House and 1000 vehicles per hour at at the Development Bureau. Truck traffic is about 2 percent of 10,000 to 12,000 ADT. There is good sight distance at the entrance to the park. Special signage and traffic control measures will not be required according to Mr. Smith of DPW (see response to comment 1-6).

Response to Comment 1-6

As described in the response to Comment 1-5, it is not anticipated that a transportation plan will be required since the number, size, and weight of trucks is will not have a noticeable impact on traffic or road conditions. Mr. Andy Smith of DPW was contacted by telephone by CH2M HILL on October 9th, 1991 and agrees that traffic impacts are not a problem and that special planning or other measures will not be required. DPW will require that the trucks not be overfilled and that the road surface at the entrance to the park be kept clean.

Response to Comment 1-7

The operations of the two canneries will not be disrupted during the construction of the joint outfall. Operations near the dock will be coordinated between the canneries and the contractor to minimize interference with either operation. The switch from the present outfalls to the new joint outfall will be a relatively fast operation (a few hours) and can easily be coordinated to be done during a time when effluent is not normally discharged.

Response to Comment 1-8

The pipeline will be inspected and maintained by the canneries under an agreement for the operation of the joint outfall. The design engineer recommends an annual inspection for the first three years and at five year intervals thereafter. An inspection is also recommended after extreme storm events or if the outfall does not appear to be operating normally. Inspection of critical areas can be done by visual inspection by a diver. Inspection of the entire pipeline would be less frequent and may be done with a remotely operated vehicle (ROV). Small ROVs with video cameras are readily available and can be shipped to American Samoa easily.

should be done annually

Response to Comment 1-9

Materials to repair damage to or breaks in the pipeline will be kept in American Samoa. These materials include stainless steel connectors and lengths of pipe. A break could involve the installation of a single connector or, in more extreme cases,

the removal of a damaged piece of pipe and the installation of a new section with two of the connectors. This type of repair is routinely used on water supply and wastewater pipes. In the shallower sections the repairs can be accomplished by local diving contractors. For deeper sections the repair would require a diving spread more involved than what is available locally. However, there are many commercial diving contractors that could mobilize and be on site within a few days. With all required materials stored in American Samoa foreseeable pipeline damage can probably be repaired within a week.

Response to Comment 1-10

Specific comments from the Harbormaster's Office are addressed in Section 3.6 below. The previous coordination with the Harbormaster's Office includes the following:

- In November of 1990 Andrew Resnick and Dale Jensen of Makai Ocean Engineering twice talked to Silila Patane, the Harbor Master. Discussions were carried out that covered all of the comments in his letter (Section 3-6) with specific reference to the location of the anchorages and with reference to the location where large ships turn on anchor. It was indicated that anchorages are discretionary and determined by the Harbormaster. It was also stated that there would be no problem having ships needing to turn on anchor to drop anchor west of the range line and thus avoid any interference with the pipe.

- In June of 1991 Andrew Resnick and Dale Jensen of Makai Ocean Engineering met with Mel Makiwi and went over sheet number one of the preliminary final design (Appendix B of the DEIA). It was agreed that the project would work.

- In July of 1991 CH2M HILL contacted Leroy Ledoux and he was faxed a copy of the project description and a list of issues to be discussed. CH2M HILL was referred to Mel Makiwi who was contacted by telephone on July 22, 1991. Harbor operations and anchorages were discussed. A copy of the anchorage areas as previously described to Makai Ocean Engineering was faxed to Mr. Makiwi and he returned a revised version which is shown on Figure 4-4 of the DEIA. It was indicated that Anchorage 1 was most used. Concern was expressed about ships dragging anchor in Anchorage 2 during high winds.

- On October 7, 1991 representatives of Samoa Packing Company, StarKist Samoa, and ASEPA met with the Silila Patane to discuss the project and the concerns expressed in his comments on the DEIA. The following week representatives from the cannery also met with

Leroy Ledoux to further address the concerns of the Port Administration. The result of these meetings was support of the project by the Port Administration and agreement that their concerns had been adequately addressed. A letter from the Port Administrator, Leroy Ledoux, to Patai Faiai of ASEPA documenting that the concerns of the Port Administration have been addressed is included in Section 4 below in response to the request included in the comment.

3.2 COMMENTS AND RESPONSES FOR LETTER NUMBER 2

American Samoa Environmental Protection Agency
from the
Public Hearing of September 5, 1991

AMERICAN SAMOA ENVIRONMENTAL PROTECTION AGENCY

Comments from the Public Hearing on
Proposed Cannery Pipeline in Pago Pago Harbor
September 5, 1991

1. It would seem to be better to locate the pipeline discharge outside of Pago Pago Harbor. Why do the regulations prohibit this? (Dr. Peter Craig, DMWR)

2. You say the concentration of discharge stays below 70 feet. What will happen in ten years? What will be the concentration of the waste near the beach? Will the waste go near the shallow areas? Are you sure of your calculations? How about the bacterial content? Where did the stuff on the beach come from last week? (Chief from Aua village)

3. What type of power will be used to transport the waste through the pipeline? What effects will happen if you move the discharge to the open ocean?

7. How far is the reef line from the difuser? Just move it out further and then it won't come back into the harbor.

Why are you concerned about the ocean?
Manaia Filiaga, Chief, citizen

4. I am a certified diver and I measured the distance from the reef to the diffuser and it's only 30 feet. I live and fish there and I'm concerned it is so close. (Man from Aua).

5. You seem confident in stating the waste material will move from the harbor, yet no full seasonal cycle of drogue studies in Pago Pago Harbor was completed. The major circulation in the harbor is wind driven. If so, do the predominantly south southeast winds push it back into the harbor? (Pam Knudsen, DMWR)

6. What will happen if there is a violation of the mixing zone permit? Would the two companies be jointly responsible for violations? (Richard Volk, ASCMP)

7. What is the method for fixing the pipeline in case of breakdown? e.g., if a boat puts its anchor there and damages the pipe?

8. How do you repair the pipe at 170 ft? Do you have to bring in a team with a decompression chamber? What will happen if the pipe breaks? What will happen if the pipe breaks? What backup for waste disposal does the cannery have? Will the cannery shut down? (Peter Craig, DMWR)

9. What is the cost of completing the pipe? What is the cost for construction beyond the harbor? Who bears the cost of the pipeline? People from Yacht Club and sportsmen were not asked their opinion. I am concerned that the south east trades could blow the

20 waste to the shore. (Jim McGuire, citizen)

21 10. There will be problems if the pipeline is not extended. The nearby village does not fully understand. (Manaia Filiaga, Amaua village)

Response to Comment 2-1

The 1989 Revision of the American Samoa Water Quality Standards (ASWQS) prevent the outfall from being located in the open coastal waters. Open coastal waters begin seaward of a line between Breakers Point and Niuloa point [ASWQS 24.0201(m) and (n)].

Discharge of industrial waste material is prohibited [ASWQS 24.0206(d)(2)(B)]. In addition the standards water quality for open coastal waters are 130 and 15 micrograms per liter of total nitrogen (TN) and total phosphorus (TP), respectively. [ASWQS 24.0207(f)(2) and (3)]. These concentrations are very close to open coastal background levels (which are approximately 120 and 30 micrograms per liter for TN and TP, respectively. This means that the definition of a "reasonably sized" mixing zone for existing cannery nutrient loadings is not feasible.

The reason why the regulations are written as they are is a complicated question with both philosophical and legal overtones. A complete discussion of the reasons is not required by the intent of the DEIA or FEIA preparation, However, the authority for the ASWQS is described by section 24.0203 of the ASWQS:

> *The standards of water quality and the classification of the waters of the Territory of American Samoa, according to their present and future beneficial uses, have been prepared as required by the Federal Water Pollution Control Act of 1972, as amended, and in accordance with the territorial Environmental Quality Act, 24.0101 through 24.0169 ASCA.*

Response to Comment 2-2

This and comments 2-3 and 2-4 express understandable and valid concerns about the results of the studies done for this project. Under most conditions the plume trapping level is predicted to be below 70 feet. This will not change over time. The predictions are based on steady state calculations (the predicted concentrations of TN and TP will not, on the average, vary with time unless the loadings from the canneries increase). However, the predictions used for the mixing zone accounted for future increases in loading.

The predicted concentrations of TN and TP near the beach can be determined from the calculations presented in the *Engineering and Environmental Feasibility Evaluation of Waste Disposal Alternatives* (CH2M HILL 1991) and from specific data presented as a part of the mixing zone application. Along the shoreline closest to the diffuser the concentrations of TN and TP will be below the American Samoa Water Quality Standards of 200 and 30 micrograms per liter, respectively. The concentrations will be lower than those associated with the previous inner harbor discharge locations. Only within the mixing zone (in deeper water) will concentra-

tions exceed the standard. This will normally be a small area (see response to comments 1-1).

All calculations were done using accepted scientific and engineering methods. Quality control and quality assurance steps were taken throughout the studies. The predictions are based on worst case conditions always using conservative assumptions. The predictions probably indicate in higher concentrations than will be observed.

Response to Comment 2-3

There is no known bacterial component in the cannery effluent that is harmful to marine life or poses a human health concern.

Response to Comment 2-4

The source of the material that recently washed onto the beach is not known. Some attempts have been made to characterize the material. ASEPA may have more information by the time this FEIA is published. Some plant fibers were found in the material which does not indicate the canneries as the source.

Response to Comment 2-5

Effluent will be pumped through the outfall. The present plan is that each cannery will have an independent pumping system, but the pumping will be coordinated between the two systems.

Response to Comment 2-6

Moving the discharge to the open ocean will reduce the concentrations within the harbor somewhat. However, the change will be relatively small compared to the proposed plan of high strength waste segregation and an outer harbor discharge location. Discharge under the proposed conditions will meet water quality standards. Discharge into the open ocean will not meet standards (see response to comment 2-1).

Response to Comment 2-7

The reef line (where the reef flat ends and the steep reef face begins) is about 600 feet from the diffuser location. Figure 3-5, and the preliminary plans in Appendix B, of the DEIA shows this relationship.

Response to Comment 2-8

See responses to comments 2-1 and 2-6 above. Moving the discharge point from the inner harbor to the proposed location will result in meeting the ASWQS throughout the harbor (with a zone of mixing allowed). Moving the discharge point further out into the harbor will have a small additional effect on TN and TP concentrations. Moving the discharge farther out will also result in potential violations of open coastal water quality standards. The latter point is discussed in more detail in the response to comments on letter number 4 (see response to comment 4-1 below).

Response to Comment 2-9

The concerns behind the comment are understandable and have been carefully considered in all phases of the studies involved in this project. Other comments addressed the same question and underlying concerns. Please see comments 2-1, 2-6, and 2-8 above; reference to comment 4-1 below may also be useful.

Response to Comment 2-10

Apologies are extended to the commentor. There was apparently a misunderstanding of the question during the public hearing. The 30-foot distance is about the distance from the reef line to the edge of the mixing zone. The diffuser location is about 600 feet from the reef line (see response to comment 2-7 above).

Response to Comment 2-11

The concern expressed by the commentor from Aua is recognized. There is no expected impact on fisheries including traditional fisheries in Pago Pago Harbor. Please see the response to comment 1-1 above and the sections of the DEIA that discuss this point referenced in that response.

Response to Comment 2-12

The predictions of concentrations in the harbor were made based on diffusive type dispersion alone. Net (long term average) currents were not explicitly used in formulating the predictions. The predictions were calibrated and verified using actual data on loadings and concentrations throughout the harbor. The Feasibility Study and Appendices to that study describe the model and model approach in detail.

Using what information is available about currents in the harbor (summarized in the Feasibility Study) it is concluded that the current pattern in the vicinity of the diffuser will be favorable. The flushing of material from the diffuser location will be better than accounted for by the model. This reflects the conservative nature of the modeling, analysis, and prediction of TN and TP concentrations.

It is not known quantitatively how much effect currents will have. Considerably more data would be required for that to be determined. However, it can be stated qualitatively that with the known current pattern better conditions will result than predicted by the model.

Response to Comment 2-13

As described in the Feasibility Study and the DEIA, the predominant winds result in a current pattern as shown in Figure 4-1 of the DEIA. In the vicinity of the proposed diffuser the currents due to these winds result in a seaward transport of material at both the surface and particularly at depth where the effluent plume will be trapped.

Response to Comment 2-14

Please see the response to comment 1-2.

Response to Comment 2-15

Please see the response to comment 1-9.

Response to Comment 2-16

Please see the response to comment 1-9. Repairs at 170 feet would require diving services from outside American Samoa and a decompression chamber and surface air supply diving equipment would be required.

Response to Comment 2-17

The canneries have limited storage capacity for effluent. It is possible that a break in the pipe, especially in deep water within the mixing zone, would not result in water quality violations under average discharge conditions. The action of the canneries would depend on the conditions of the operational permits from ASEQC and USEPA. It is possible that the canneries would have to discontinue operations, under some circumstances, until repairs were made. For this reason the decision has been made to have repair materials stockpiled in American Samoa. A prearranged agreement with a diving firm(s) may also be considered.

Response to Comment 2-18

The canneries have budgeted $3 million to construct the outfall. The cost to construct beyond the harbor was not specifically addressed during the recent studies. However, the Feasibility Study includes information which can be used to estimate the cost of such a pipeline. As the length of pipe increases the cost per foot decreases, up to a some point. However, a longer pipeline may require a larger diam-

eter pipe and construction near or beyond the harbor mouth would be more difficult due to sea conditions and deeper water.

Using Figure 5-6 from the Feasibility Study a rough idea of costs versus length can be estimated. Appendix E of the Feasibility Study provides more details of the cost estimates. The cost per foot for extending the pipe beyond the proposed location will not decrease significantly from the cost per foot of the proposed length. Near the harbor entrance the cost per foot will begin to increase.

It is not unrealistic to consider that construction from the presently proposed location to the mouth of the harbor would approximately double the cost of construction. Beyond the mouth of the harbor the cost would increase significantly. In addition maintenance, operational, and inspection costs would increase considerably for such an outfall.

Response to Comment 2-19

The public hearing and comments on the DEIA provide a forum for the public to express their opinion about the project. The proposed outfall is not a sudden development, but is the culmination of many years of studies, project analysis, and development.

Response to Comment 2-20

Southeast trades are the predominant winds during a large part of the year. The circulation induced by those winds was addressed in the Feasibility Study and described in the DEIA (Figure 4-1). Those winds result in a current pattern favorable to flushing for the location selected for the outfall diffuser. Please see responses to comments 2-12 and 2-13.

Response to Comment 2-21

Concerns of the villages in the vicinity of the outfall and diffuser were recognized and understood. A second public hearing was held to address those concerns. Responses to other comments from this list (letter number 2) also address those concerns. Especially responses to comments 2-2, 2-3, 2-4, 2-7, 2-8, 2-9, 2-10, and 2-11.

3.3 COMMENTS AND RESPONSES FOR LETTER NUMBER 3

American Samoa Environmental Protection Agency

AMERICAN SAMOA GOVERNMENT
PAGO PAGO, AMERICAN SAMOA 96799

In reply refer

OFFICE OF THE GOVERNOR
ENVIRONMENTAL PROTECTION AGENCY
Serial:400

SEPTEMBER 16, 1991

To: Chairman, PNRS

From: Director, American Samoa
Environmental Protection Agency

Re: Proposed Cannery Pipeline EIA Comments

We would like to provide the following comments on the proposed cannery pipeline EIA.

1 1. On page 3-13, it states the ASEQC has permit authority over the environmental impact review process. This is not correct. The EIA was prepared as a portion of the Land Use Permit application package. The ASEQC acted as one contact point for cannery officials and consultants. The public hearing was a jointly held but Development Planning Office (PNRS) and ASEQC for expediency.

2 2. In sections 4.13 and 4.2, the recreational and industrial aspects were not discussed.

3 3. On p 4-19, what will be done about accidental oil spills, containment, and clean up?

4 4. On p 4-19, during the pipeline deployment, will there by any specific migration or breeding time for aquatic species in the area? More specifics may be needed on this.

5 5. On p 4-17, if the pipeline were to run a little further before making the sharp turn, the anchorage area (#2) would be less affected.

Please contact Sheila Wiegman of my staff should you have any questions on the above comments.

Pati Faiai

cc: Environmental Coordinator
Enforcement Branch

Response to Comment 3-1

The comment is correct. Ms. Sheila Wiegman of ASEPA provided coordination for environmental permitting. Required permits and review agencies are listed in Table 5-1 of the DEIA.

Response to Comment 3-2

Section 4.1.3 is a description of the environmental setting and Section 4.2 is a description of the environmental consequences. As described in the Executive Summary of the DEIA the environmental setting was described only to the level required to describe the environmental consequences.

Recreational aspects of Pago Pago Harbor include the entire range of body contact, boating, and shoreline activities normally associated with nearshore waters and embayments. The zone of mixing application submitted to EQC considers recreation in the analysis of protected uses listed in Section 24.0206(c)(2)(A) of the ASWQS. Some recreational boating activities may experience temporary impacts during construction (but no major interference). All activities including recreational boating are expected to experience potential improvements (beneficial affects) because of improved water quality.

Industrial uses of the harbor will not be impacted (except as noted below) and thus were not described in the environmental setting. The extension of the outfall to the outer harbor and the granting of a zone of mixing will allow the canneries to continue operation. There is a potential benefit for industrial use with improved water quality and it is noted that industrial water supply is a protected use of Pago Pago Harbor waters [aswqs 24.0206(c)(2)(A)(VII). The following are excerpts from the Zone of Mixing application for the joint cannery outfall:

> *The operation of the canneries and the improvement of water quality in Pago Pago Harbor are both clearly in the public interest. The canneries provide a significant portion of the economic base of American Samoa and account for nearly 90 percent of the private sector employment as described in the Use Attainability and Site-Specific Criteria Analysis. The improvement of the water quality of the harbor is important for enhancing and encouraging the tourism segment of the local economy. Improved water quality in the harbor also enhances the quality of life the citizens of American Samoa and the ecological health of the harbor.*
>
> *The discharge of wastewater is necessary for the continued operation of the canneries. It is not feasible for the cannery discharge to meet ASWQS at the point of discharge (POD). In order for the canneries to continue operations a zone of mixing is required. Granting a zone of mixing for a relocated outfall will allow*

continued operation of the canneries as well as provide a significant improvement to the present water quality standards.

Compliance with the water quality standards at the point of discharge would require that effluent concentrations be reduced by a factor of over 1000. This is not economically or technically feasible. Conformance to the standards at the POD would force the canneries to cease operations or modify operations in a manner that would significantly reduce their economic benefit to American Samoa. Extension of the outfall and permitting of a mixing zone will improve water quality and allow continued operation of the canneries.

Response to Comment 3-3

A suggested mitigation measure to handle accidental oil spills is presented on page 4-25:

The contractors will be required to take appropriate measures to prevent and clean up accidental spills of any liquids or solids, especially gasoline, oil, grease and epoxy.

All suggested mitigation measures were provided to the design engineer and were, as appropriate, included in the bid documents for potential contractors. Additional conditions could be placed on the construction permits as required.

Response to Comment 3-4

Informal and formal consultation was carried out with the National Marine Fisheries Service (NMFS). The initial response by NMFS was included in Appendix A of the DEIA. A copy of the formal response in connection with the U.S. Army Corps of Engineers (COE) permit is included in Section 4 of this FEIA. There appear to be no critical times for aquatic species; if there were, NMFS would request a permit condition on the COE permit to protect and rare or endangered species. (U.S. Fish and Wildlife Service declined to respond to the Section 107 consultation request by the COE indicating no concerns within their jurisdiction.)

Response to Comment 3-5

The comment is correct. However, examination of the detailed bathymetric data acquired during the feasibility study indicates that this would result in an undesirable profile for the pipeline. The result would be high spots along the run of the pipeline which could lead to undesirable accumulations of gas in the pipeline. The design engineer selected the pipeline route to avoid this problem and still minimize interference with the anchorage.

3.4 COMMENTS AND RESPONSES FOR LETTER NUMBER 4

American Samoa Power Authority

American Samoa Power Authority

P.O. Box PPB
Pago Pago, American Samoa 96799
Facsimile No. (684) 644-5005
Phone (684) 644-5251

In reply refer to:

September 6, 1991

American Samoa Coastal Management Program
Economic Development Planning Office
American Samoa Government
Pago Pago, American Samoa 96799

Subject: Joint Cannery Proposed Pipeline

Dear Mr. Viena:

As Wastewater Division Manager of the American Samoa Power Authority (ASPA), and as a Sanitary Engineer closely associated with the earlier Cannery Wastewater Studies from 1985-87, I have reviewed the final report and appendixes of the "Engineering and Environmental Feasibility Evaluation of Waste Disposal Alternatives", the contract documents consisting of the design specifications and drawings for the construction of the Cannery Proposed Pipeline and the Draft Environmental Impact Assessment. I offer the following comments when the PNRS committee considers preparing a Land Use Permit and ASEPA (Sheila Wiegman) considers possible permit considerations.

The conclusion of all the data leading up to the EIA is that:

> *As the effluent discharge location is moved from the head of the harbor toward the mouth of the harbor the allowable loadings become higher and the associated zones of mixing become smaller (P3-8).*

1 The EIS does not address sufficiently why the line was not extended out further to reduce the zone of mixing, nor is it clear that the point of proposed discharge is not the minimum acceptable point. From the public hearing yesterday, I was not convinced that the location proposed is necessarily the best position or the only position.

2 **It appears that the outfall could be extended 1500 feet further out into the "outer" harbor, without impacting what CH2M-Hill considers the "ocean waters" or the "open coastal waters".** The Water Quality Standards define the Pago Pago Harbor with a

line drawn from Blunts Point to Breakers Point. By extending the line out approximately 1500 feet, the outfall would discharge in deeper water. The depth of the outfall if lengthened would appears from the nautical charts to go from 28 to 34 fathoms. It would be located offshore of the tank farm, which would avoid discharging near the villages, and perhaps of more importance it would avoid discharging on the harbor side of Toasa Rock which is a significant rise in the harbor floor just off Anasosopo Pt.

2

The Water Quality Standards also state that *"No part of shoreline or barrier or fringing reef shall be included in any zone of mixing".* From the public hearing it appears that the proposed zone of mixing which will be required clearly abuts the wall forming the reef. It is unclear to me that the plume and the captured discharge will not impact the reef wall even though the plans and the model show that the plume will remain submerged. This is another reason to extend the line and move it further away from the reef line. (see attached)

3

Coordination with the American Samoa Port Administration and the U. S. Coast Guard will be made to assure minimization of navigation interference during construction and operation of the pipeline (P3-13).

Permit requirements should have the canneries and their consultants responsible for arranging for the Coast Guard to indicate the location of the pipeline in its publications and charts and, if possible, secure a restricted anchorage area to protect the pipeline, have the pipeline route included on NOAA navigation charts and provide evidence that the American Samoa Port Administration has taken the necessary precautions to minimize damage to the pipeline as part of their standard operating procedures.

4

Maintenance and repair of the marine pipeline appears to present a distinct disadvantage. The pipeline will typically be in more than 100 feet of water and will be difficult and relatively expensive to repair if damaged, and detected.

It is recommended that the permits require that contingency plans including funding, materials, areas of responsibility, possible fines or cannery closure should be considered and prepared for in advance of the system failing. (Although, it is in the canneries interest to keep the outfall system working, it

5

also may be difficult for enforcing agencies to detect violations). There should be an operation and maintenance manual prepared as part of the design. In addition, the repair procedures designed and developed as part of the design, should also be included in the permits.

5

I cannot find much information on the pumping arrangements that will be utilized by each cannery. The extent of the construction contract and the EIA is only for the outfall. **I believe that both the LUP and NPDES permits (or some other appropriate documents) should require the canneries to provide written operating plans and maintenance manuals of the pumping arrangement. The permits should require the canneries to have backup pumps available on island and other spare parts.** Although, as mentioned earlier, it is in the canneries interest to operate wisely and efficiently, we all know how things break or end up getting bypassed.

6

Thank you for allowing me to comment on the proposed cannery pipeline. I am highly confident that both CH2M-Hill, and Makai Ocean Engineering are responsible organizations with excellent reputations. Although the canneries in the past have done everything they could legally do to avoid this project, they have now exhausted their options and are committed to comply with the consent agreement. I do not have any significant problem with that which is proposed except for my comments described above.

Sincerely,

Michael Dworsky, Captain, USPHS
ASPA-Wastewater Division Manager
EPA Construction Grants Manager

cc: Sheila Wiegman, ASEPA

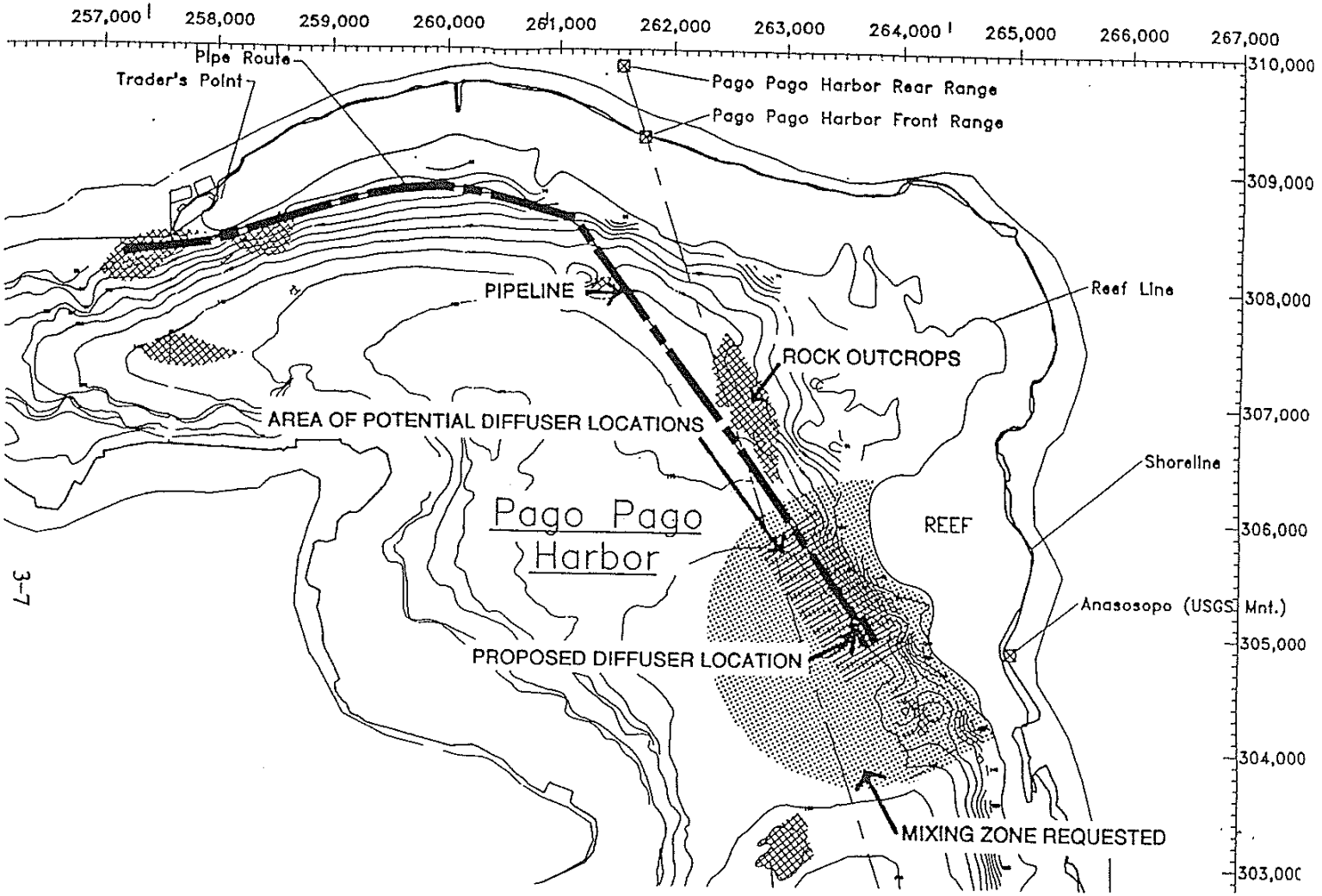


FIGURE 3-5
LOCATION AND SIZE OF THE
REQUESTED ZONE OF MIXING

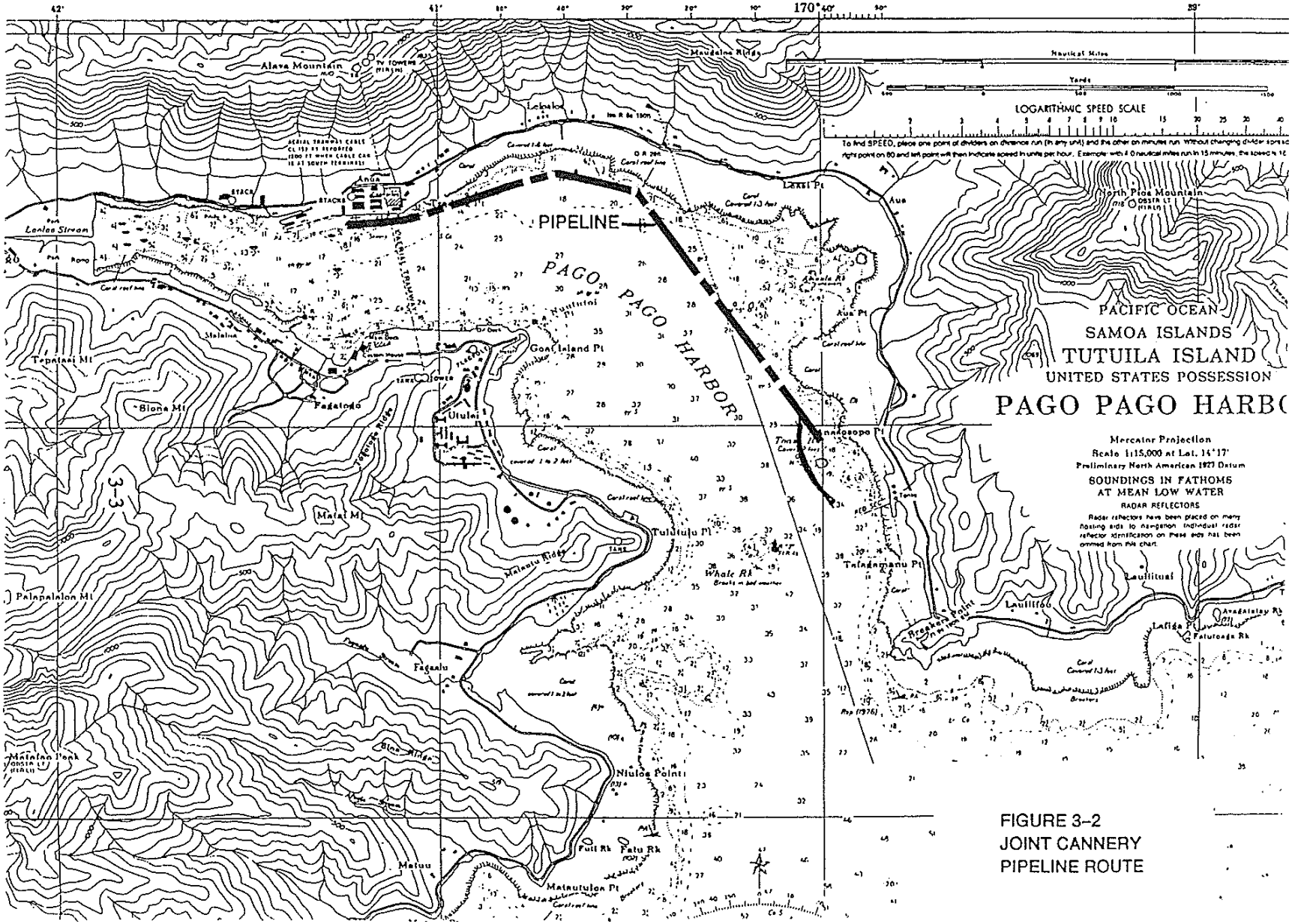


FIGURE 3–2
JOINT CANNERY
PIPELINE ROUTE

FIGURE 4-4
TYPICAL HARBOR
ANCHORING AREAS

Response to Comment 4-1

Please see response to comments 2-1, 2-6, 2-7, and 2-9.

Figure 3-5 of the DEIA (attached to this comment letter) shows a region of potential diffuser locations. This area was determined as described in the excerpt below taken from the mixing zone application:

> *The requested zone of mixing is located offshore of the eastern shoreline of the harbor between Anasosopo Point and Ava Point. The center of the diffuser (center of the zone of mixing) is approximately at Northing 305,100 and Easting 263,700 as shown in Figure 1. This location may change slightly during final design and construction. However, the center of the mixing zone will be within the limits for potential diffuser locations shown on Figure 1.*
>
> *The location of the requested zone of mixing was determined based on a feasibility study conducted by CH2M HILL (1991), referred to as the Feasibility Study in discussions below. The analyses done during the Feasibility Study indicated a range of potential diffuser locations that would result in compliance with water quality standards at anticipated discharge conditions and meet other criteria as discussed below. The location proposed as shown on Figure 1 near the south end of the area of potential locations was selected based on the following factors:*
>
> - ***Water Quality Standards for Pago Pago Harbor:*** *the allowable loading of total nitrogen (TN) and total phosphorus (TP) was predicted for locations in the harbor between the closed end (head) and open end (mouth) of the harbor. The allowable loading was considered the loading that would result in compliance with 1989 Revision of the American Samoa Water Quality Standards (ASWQS) throughout the harbor (except within the zone of mixing). As the effluent discharge location is moved from the head of the harbor toward the mouth of the harbor the allowable loadings become higher. However, a mixing zone will be required regardless of the loading or location.*
> - ***Water Quality Standards for Open Coastal Waters:*** *the standards for open coastal waters are more restrictive (lower TN and TP concentrations) than for within Pago Pago Harbor. In addition the ASWQS prohibit the discharge of industrial waste into open coastal waters. The open coastal standards therefore limit the potential location of cannery effluent discharge. The discharge location must be far enough from the mouth of the harbor to allow sufficient mixing to occur to keep the mixing zone within the harbor.*

- ***Joint Cannery Loadings:*** *A waste load allocation study has been done for the American Samoa Government:*

  > *A Waste Load Allocation Study for Pago Pago Harbor, American Samoa. Hydro Resources International, 1989. Report for American Samoa Environmental protection Agency.*

  This study indicated that the total allowable TN and TP loadings (total maximum daily loadings, TMDLs) depended on location of the discharge point. Wasteload allocations (WLAs) for the individual canneries were also discussed in the referenced report. For the purpose of locating a discharge point during the Feasibility Study a total anticipated maximum future loading was used based on projections and estimates of each cannery. These estimates are discussed in a Technical Memorandum presenting the details of the mixing zone determination and geometry provided as Attachment 2 to this application (referred to as the Mixing Zone TM in discussions below).

- ***Cost of Construction:*** *The length of the pipeline depends on the location required for the assumed loading. As described in the Feasibility Study the cost of the pipeline increases with length. However, the cost per unit length is not constant and varies with total length, flow rate, pipe material and other factors.*

A careful consideration of each of these factors using available data, new data collected specifically for the purpose, models and engineering analysis was made to select the location of the discharge and mixing zone. The background and preliminary findings are presented in the Feasibility Study; the methods used to arrive at the final determination of the mixing zone characteristics are presented in the Mixing Zone TM.

Examination of the proposed location of the diffuser and the area recommended for diffuser location shows that it is not the minimum acceptable point (shortest possible pipeline). Bathymetric and shoreline features and their relation to potential circulation patterns were also considered in the final diffuser site selection. The selection of the "best" position does involve some professional judgement, particularly as to the degree of conservatism (safety factor) to apply to the model predictions involved in the analysis. CH2M HILL does not recommend diffuser sites outside of the area indicated on Figure 3-5 of the DEIA with additional data collection and analysis.

Response to Comment 4-2

It may be possible to extend the outfall an additional 1500 feet as suggested without impacting open coastal waters. However, the analysis done by CH2M HILL, including the model predictions, are not sufficient to support that suggestion. The

models used were for application to Pago Pago Harbor and did not include a large area of open coastal water adjacent to the harbor. A model that could account for a sufficient area of the adjacent open coastal area would need to be constructed, validated, calibrated, verified, and run to strongly support moving the discharge closer to the harbor entrance. This would probably require additional data and/or data analysis for the model input. A more sophisticated model and long term wind records (at the harbor entrance) would be required.

Bathymetry from the nautical chart is not as detailed as that acquired during the Feasibility Study. Examination of that data shows that the route proposed in the comment could result in high spots in the pipe and a more substantial rerouting would be required to move the diffuser farther seaward.

Response to Comment 4-3

During times when the plume is submerged the trapping level is predicted to be about 70 feet below the surface. The plume may impinge on the steep wall seaward of the reef flat but will not impact the reef area shoreward of the reef wall. The American Samoa Water Quality Standards Section 24.0208(c)(3)(H) has been interpreted, in terms of a fringing reef, to apply to the area landward of the reef line (line where the relatively horizontal reef flat transitions to the steep wall bordering the reef). Such an interpretation, in the absence of any definitions in the water quality standards, appears reasonable and prudent. Some definition must be applied or the case can be made that the reef extends almost indefinitely.

Response to Comment 4-4

A permit requirement that the Coast Guard be notified of the location of the pipe and include that in pertinent publications is reasonable and was presented as a potential mitigation measure in the Feasibility Study. The National Ocean Service of NOAA publishes nautical charts and should also be notified. The question of restricted anchorages was discussed with the Coast Guard and it was determined that such an area can not be defined by the Coast Guard. Please see response to comment 1-10 and responses to letter number 6 for additional discussion of coordination with the Port Administration.

Response to Comment 4-5

Please see response to comments 1-8, 1-9, 2-16, and 2-17 for discussions of maintenance, repair, and cannery operations. See response to comment 1-2 and 2-14 for discussions of violations.

The preparation of operations and maintenance manuals is generally a decision between the designer/supplier and the facility operator. It is unusual to require documentation of this nature as a permit condition; it is more usual to require the

operator to be responsible for the permit limitations on effluent characteristics and water quality parameters. If the operator determines that operations manuals are useful to meet permit limitations, then the decision to acquire such documentation is made at the operator's discretion.

Response to Comment 4-6

The EIA is prepared for the construction of the outfall. The construction and operation of the pumping system is not permitted as a part of the outfall. Existing facilities will be modified as required, or new facilities installed, to adequately move the effluent through the outfall. Please see the response to comment 4-5 in connection with operating and maintenance manuals for the pumps.

It may be prudent for the canneries to have spare pumps (or parts) on hand. However, permit conditions generally regulate effluent and water quality conditions. If the operator determines that spares, operations manuals, or other documentation are useful to meet permit limitations, then the decision to acquire such documentation is made at the operator's discretion. If the canneries believe spares would be useful in avoiding violations then they may decide to keep them on hand. The decision to require operations plans, operating and maintenance manuals, and spare parts inventories as a proposed permit condition is, of course, the decision of the permitting agencies.

3.5 COMMENTS AND RESPONSES FOR LETTER NUMBER 5

American Samoa Department of Marine and Wildlife Resources

DEPARTMENT OF MARINE & WILDLIFE RESOURCES

AMERICAN SAMOA GOVERNMENT
P.O. BOX 3730
PAGO PAGO, AMERICAN SAMOA 96799

TEL: (684) 633-4456
FAX: (684) 633-5944

Serial:0097-91

11 September 1991

TO: Lelei Peau, ASCZM Manager

FROM: Henry Sesepasara, DMWR Director

SUBJECT: Conditions for Joint Cannery Outfall Project EIS

We are pleased that the canneries are making progress toward relocating the outfall pipe to the outer harbor. We do however, have several concerns regarding the proposal to locate the staging area along the banks of Laolao Stream and the harbor shoreline.

As you are aware, we usually require a 25 foot no management/disturbance buffer along the riparian corridor to protect stream bank integrity. In this case we are particularly concerned about the type and size of equipment to be used and stored in the area. Because Laolao Stream is not "pristine" ie., previously disturbed, we will reduce the riparian buffer requirements to 10 feet-no disturbance-along the riparian corridor. This buffer should be roped-off and flagged conspicuously. 1

The temporary harbor ramp should be constructed to minimize shoreline damage and should be situated 25 feet from landward edge of riparian buffer. The applicant should indicate the dimensions, materials and design of the ramp. Precautions should be taken when anchoring to avoid weakening of the harbor banks. Any disturbed ground cover should be replaced immediately. 2 3

pk

Response to Comment 5-1

A ten (10) foot setback from the stream bank was indicated as a mitigation requirement for construction impacts in the DEIA (page 4-26). The design engineer (Makai Ocean Engineering) was supplied with a list of the suggested mitigation requirements for inclusion in the bid documents supplied to potential contractors as appropriate. Roping and flagging this area was not indicated in the DEIA and should be included as a permit requirement if appropriate. The design engineer was advised of this requirement by telephone on October 4, 1991. (See response to comment 5-3 below for more discussion on this point.)

Response to Comment 5-2

The purpose of the temporary ramp is to minimize disturbance to the harbor shoreline and minimize impacts to water quality. The suggested mitigation requirement includes a provision to minimize shoreline damage during ramp placement and removal. The design engineer was supplied with a list of the suggested mitigation requirements for inclusion in the bid documents as appropriate. The additional set back for the temporary harbor ramp was conveyed to the design engineer on October 4, 1991. This requirement was not included in the DEIA and should be included as a permit requirement if appropriate.

Response to Comment 5-3

The banks of the harbor are low and lined, or partially lined, with rip-rap in the area where the ramp will be located. It is anticipated that the ramp will be approximately 30 feet long. Based on discussions concerning this comment it has been determined that the contractor will coordinate the design and placement of the ramp with DMWR. DMWR and the contractor have made a site visit to the park to clarify the setback requirements at the mouth of the creek. DMWR has suggested that the actual prparation for installation of the ramp be carried out under the direction of DMWR and ASEPA to form a good connection to the shoreline by the temporary ramp. The pipe is relatively light and easy to handle so that it is not expected that the ramp will damage or weaken the harbor banks. One of the previously suggested mitigation measures includes restoring the park to its original condition and re-vegetating areas as necessary (see DEIA, page 4-26). Additional conditions required should be included in the permit conditions as appropriate.

3.6 COMMENTS AND RESPONSES FOR LETTER NUMBER 6

American Samoa Department of Port Administration
(Harbor Master's Office)

AMERICAN SAMOA GOVERNMENT
PAGO PAGO, AMERICAN SAMOA 96799
DEPARTMENT OF PORT ADMINISTRATION
HARBORMASTER'S OFFICE

In reply refer to:
Serial: #14
HMO/MM/ots1

16 September 1991

To: Miss Shila Wiegman
Director, ASEPA

Via: Director of Port Administration

From: Harbor Master

Subject: Joint Cannery Outfall

I have just read the article in the Samoa News of the Public Hearing held at the Rainmaker Hotel, Thursday September 5, 1991 regarding the proposed route and outfall of the canneries waste water system. Unfortunately, our Department was not represented at that hearing for comments.

As a member of the public and also the Harbormaster, it is indeed a welcome indication whenever industry is concerned about the impact of waste in our harbor and are willing to undertake some form of effort to lessen impurities and comply to water quality standards. However, the proposed project certainly reduces inner harbor mixing of waste water but in all indication, transfer the same situation to our outer harbor and reef fringes.

1 Statements made by Mr. Costa of CH2M Hill that natural currents will flush the outfall area to sea is rather unsound as Pago harbor has not emptied out years of accumulated waste. As a matter of opinion and years of observations, it seems whatever leaves the harbor, returns. One can actually see the wall of discolored water move back and forth into our harbor. We are just as anxious as the researchers recommending this proposal that this current flow is fact and not wait another ten years and find they are wrong. Statement was made that the site for the outfall

2 was determined by environmental, engineering, financial and maintenance factors. I think someone forgot economic benefits in which our environmental ecology is being sacrificed!

3 However, the purpose of writing this letter is to refute Mr. Resmich statement that the layout of the pipeline was ensured by the Harbormaster that ship's anchors will not drag or threaten to puncture or tear the pipeline.

3 As a matter of fact the proposed pipeline runs over part of our anchorage area. Our earlier recommendation was to lay it on top of the reef or alongside the road to clear the anchorage area. We have no way of
4 guarantee that ships anchors will not damage the pipeline especially after a vessel is at anchor and clear-off the line and should high winds occur after anchorage, the anchor will not drag and tear the lines.

5 Another suggestion was to place the lines as near to the edge of the reef as possible so that even if high prevailing winds occured, the pipeline will be safe and protected. Taking note of the layout, it seems that the line is set on the eight to ten feet fathom curve. Should this line fall due to slippage to the twenty fathom barometric curve, it will also be in the anchorage depth and area.

6 As part of my duties and responsibilities as harbormaster, I must ensure safe passage, safe berthing, mooring and anchorage of all vessel traffic in and out of the harbor. The proposed line is in one of our designated anchorage area. The need for solutions to solve our water quality stan-
7 dards with in our harbor is essential to our health, living marine resources, estuary as well as habitat for these resources. Wise use and planning to maximize benefits should always be our objectives.

Thank you for your concerns regarding the proposed pipe line and to take into considerations some of our comments on this issue.

Sincerly,

SHILA PATANE

Copy to:
Deputy Director, Port
Port/Airport Engineer
Administrative Officer, Port

Response to Comment 6-1

Extensive analysis and model predictions were done to investigate and characterize the flushing of the harbor. Material discharged to the harbor waters will not remain indefinitely but, on the average, will leave the harbor at the same rate as input to the harbor. Discharge location in the harbor determines the steady state concentrations of material in the harbor. An inner harbor discharge results in higher concentrations in the harbor than an outer harbor discharge location. Return flow of harbor water through the entrance does occur. However, the effect of return flow at the harbor mouth, due to tidal current reversals, is implicitly included in the model predictions because of the way the model was calibrated. Responses to comments 2-2,3,and 4, comment 2-12, and 2-13 also discuss aspects of this comment.

Response to Comment 6-2

Environmental, engineering, operational, regulatory, and economic factors were all considered in the selection and proposed design of the joint cannery outfall. The location of the outfall diffuser was primarily controlled by water quality standards as applied under the assumption of continued cannery operation. A number of responses to comments in letters 2 and 4 address the reasons for the selection of the location of the diffuser. See, for example, responses to comment 2-1 and responses to comments 4-1 and 4-2.

Response to Comment 6-3

During the public hearing Mr. Resnick of Makai Ocean Engineering did not state or intend to imply that the Harbor Master had ensured that the pipeline would not be threatened by ships anchors. The canneries recognize the potential danger to the pipeline and Mr. Resnick and Mr. Costa described the measures that could be taken to minimize this danger. These measures are described in the Section 4.3.1 of the DEIA and additional recommendations were made in the Feasibility Study prepared by CH2M HILL (the cannery's consultant) referred to in the DEIA. In particular the notification of the Coast Guard, the National Ocean Service, and the American Samoa Port Administration of the location of the pipeline will result in advice to mariners and location on appropriate charts. The pipeline route can, if required by the Harbor Master, be marked by buoys which will be maintained by the canneries.

Coordination with the Port Administration was conducted prior to the publication of the DEIA and additional meetings have been held to address the concerns expressed in this letter. See response to comment 1-10 and the letter from the Port Administration included in Section 4 of this FEIA. Also see the response 4-4 for additional discussion of measures to minimize pipeline damage.

Response to Comment 6-4

The possibility of a land route, or partial land route, was seriously considered for the reasons stated in this comment. An analysis of the advantages and disadvantages was presented in the Feasibility Study (CH2M HILL 1990). The canneries recognize the potential risks and understand that the Harbor Master can only advise ships concerning anchorage and cannot guarantee the safety of the pipe. The location of the pipe was selected to minimize the potential of anchor drag damage and additional protection was placed in the vicinity of Trading Point. See response to comment 6-3 above and the letter from the Port Administration in Section 4 below.

Response to Comment 6-5

The route of the pipeline was selected to be close to the reef as the comment suggests. However, the pipeline route was also selected to maintain a constant downward gradient for design purposes. Thus the route of the pipeline is somewhat of a compromise. In areas of most likely exposure to dragging anchors the pipeline is either protected by a concrete cap or is so close to the reef that it is unlikely that it would be hit by a dragging anchor. The concern expressed in the comment about the possible movement of the pipe down slope into deeper water has been considered. Makai Ocean Engineering, has provided the following list of considerations:

- The pipeline has been designed with the largest weight per foot of length of any polyethylene pipeline designed by Makai (except for those in extremely shallow water). The large anchor weight per foot is used to maintain the pipe in its position after initial placement during construction.

- The bottom material below the reef along the north side of the harbor is sand and silt which the weights will sink into and thus enhance the stability of the pipeline.

- The pipeline route will be surveyed and marked to facilitate that the pipe is deployed and positioned as intended along an acceptable route. The contractor will submit a deployment plan prior to deployment to verify the positioning of the pipeline along the intended route.

- The pipeline along the north side of the harbor will be additionally anchored to padeye plates bolted to solid structure of the reef wall to prevent the pipe from slipping or moving from its intended location even under high wave and current conditions.

- The shallow locations of the pipeline route will be easily inspected by divers. A post-deployment inspection is required of the contractor. If

any evidence of movement is detected additional weights or padeye anchors can easily be added.

- The pipeline route was selected so that a ship dragging anchor would, in most cases, be on the reef before the anchor reached the pipe (this is based on a scope of 2 to 3 times the water depth).

- Experience by Makai with pipelines of this type, in more exposed locations, indicates that the pipeline will remain in position.

Response to Comment 6-6

The pipeline will not interfere with the passage of vessels in and out of the harbor nor the safe mooring, berthing , or anchorage of vessels in the harbor. The pipeline does pass within areas that could be used for anchorage and the possible risk is recognized by the canneries. The Harbor Master can help to avoid problems with anchor damage to the pipeline by advising vessels of the location of the pipeline. However, it is recognized that the Harbor Master cannot insure or guarantee that the pipeline will not be damaged.

Response to Comment 6-7

The proposed location for the outfall will result with compliance with water quality standards, will not adversely affect protected uses of the harbor waters, and will not result in a prohibited use of the harbor.

4. CONSULTATION AND COORDINATION UPDATE

4.1 PROJECT PERMITS

Several permits are needed before construction of the proposed joint cannery outfall can occur. The permits and authorizations required were discussed in the DEIA. This section presents an update to the information previously presented. Table 5-1 in the DEIA lists these permits and actions needed for compliance with environmental regulations.

4.1.1 Construction Permits

The principal local authority for construction is with the Land Use and Building Permit process. At the federal level the primary authority is with the Army Corps of Engineers Permit.

4.1.1.1 Land Use Permit. A land use and building permit application has been submitted to the American Samoa Economic Development Planning Office. The Environmental Impact Assessment process is in direct support of this permit. The DEIA was submitted to the EDPO, and this FEIA is being submitted to finalize the EIA process, primarily by publishing comments on the DEIA and responses to those comments in the FEIA.

A public hearing was held in American Samoa on September 5, 1991. Comments made at the public hearing were summarized (Comment letters 1 and 2) and are presented in Section 3 above along with the responses to those comments.

The comment letter from EDPO requested that a formal consultation with the Port Administration and Harbor Master's Office be conducted. This has been done and the written response from the Port Administration is provided in the Appendix.

A parks activity permit to use a portion of Pago Pago Park as a mobilization and staging area has been approved by the Department of Parks and Recreation on August 19, 1991.

4.1.1.2 U.S. Army Corps of Engineers Permit. Under authority granted by Section 10 of the Rivers and Harbors Act of 1890, and Section 404 of the Clean Water Act of 1972, a permit from the U.S. Army Corps of Engineers for construction in waters of the United States is required for construction of the outfall. A permit application and a COE supplied supporting environmental form was submitted to the Honolulu District COE office. The DEIA was also be sent as supporting information to assist the COE with the permit application process.

The COE conducted a review and public notice of the permit application. This process has been completed and the permit will be issued after receipt of the

American Samoa water quality and coastal consistency certifications. The response of the USEPA to the permit application is included in the Appendix.

4.1.1.3 Section 7 Consultations. As required under Section 7 of the National Environmental Protection Act, the COE permit application was reviewed by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. USFWS had no comments on the permit application. NMFS reviewed the project and the COE permit application. NMFS supports the issuance of the permit and finds that the project is not likely to impact listed species. The letters from NMFS to COE are provided in the Appendix.

4.1.1.4 Section 106 Consultation. Consultation with the American Samoa Historic Preservation Office has been initiated to comply with Section 106 of the National Historic Preservation Act. The purpose of the Section 106 consultation process is to accommodate protection of historic resources that might otherwise be irreparably lost or destroyed during alterations of terrain. This consultation is required of any federally licensed or permitted activity or program.

An initial assessment of project impacts on cultural resources, both archaeological and historical, was done. The American Samoa SHPO has reviewed this assessment and made a "no property" determination. However, some concern about potential unexploded ordnance in the harbor was expressed. Additional research was carried out to investigate that issue on the recommendation of the Territorial Archaeologist. That investigation proved inconclusive.

The letter from the Territorial Archaeologist, a letter requesting formal consultation with the COE, a letter to the Naval Historical Center requesting additional information as recommended, and the response from the Naval Historical Center are provided in the Appendix.

4.1.1.5 Coastal Zone Consistency Certification. To comply with Section 307 of the Coastal Zone Management Act of 1972, the project is required to be consistent with the policies of the American Samoa Coastal Management Program (ASCMP). Certification of consistency is required by the COE permit and will be issued by the ASCMP as part of the consistency review process after receipt of the FEIA.

Compliance with this consistency requirement was documented in the form of a letter sent to the American Samoa Economic Development Planning Office. A letter from EDPO indicating that the consistency request is complete and is provided in the Appendix.

4.1.1.6 Water Quality Certifications. Certifications that the project is in compliance with ASWQS and pertinent sections of the Clean Water Act are required. Water quality certification is also required of any applicant for a federal permit to conduct any activity in navigable waters. Therefore water quality certifications are

required for both the construction and the operation of the outfall. These certifications are issued by EQC. The water quality certification for construction has been issued and is provided in the Appendix.

4.1.2 Operation Permits

The principal authorization for effluent discharge (operation) is the USEPA and the American Samoa EQC. USEPA has permitting authority for the NPDES permit with EQC providing review functions. For the zone of mixing permit EQC provides the authority with USEPA filling the review role.

4.1.2.1 NPDES Permits. Under Section 402 of the Clean Water Act, a National Pollution Discharge Elimination System (NPDES) permit is required for the wastewater discharge of each cannery. Permit applications were prepared and submitted to the USEPA.

4.1.2.2 Zone of Mixing Permit. An application for a Zone of Mixing from the American Samoa Environmental Quality Commission has been prepared and submitted with the two canneries as joint applicants.

4.1.2.3 Coastal Zone Consistency Certification. This certification is in common with that required for construction as described above in Section 4.1.1.5. One certification is required for the project as a whole and considers both construction and operation.

4.1.2.4 Water Quality Certifications. This certification is in parallel with that described above (Section 4.1.1.6) and will be considered for issuance after completion of this FEIA. Separate certifications are required for construction and operation of the outfall.

4.1.2.5 Other Agencies. Other agencies have been or will be contacted during the permit application and permit processing activities. The agencies include the U.S. Coast Guard and the American Samoa Government Port Administration. The Coast Guard has reviewed the project. A letter from the Coast Guard is provided in the Appendix. Review by, and consultation with, the Port Administration is discussed above in Section 4.1.1.1.

4.2 PROJECT COORDINATION

Project coordination has been conducted with the pertinent American Samoa Government agencies, federal agencies, project engineers and design team (Makai Ocean Engineers), StarKist Samoa and Samoa Packing Co. environmental project and plant operations managers. This coordination has been via telephone and correspondence.

Coordination between the contractor and the Parks and Recreation Department, the Department of Public Works, and the Department of Marine and Wildlife Resources for activity in and access to the staging area has been requested and initiated as described in the comments and responses in Section 3 above. Coordination with the Port Administration and Harbor Masters Office has been initiated and will continue throughout construction of the outfall as described above.

APPENDIX

This appendix contains agency coordination and consultation correspondence referenced in the text. The following items are included:

- Port Administration Coordination
  Leroy Ledoux to Pati Faiai, October 17, 1991

- USEPA Review of COE Permit Application
  Clyde A. Morris to Lt. Colonel James T. Muratsuchi, Sept. 3, 1991

- NMFS Review of COE Permit Application
  E. C. Fullerton to Lt. Colonel James T. Muratsuchi, Sept. 3, 1991

- NMFS Section 7 Consultation
  E. C. Fullerton to Lt. Colonel James T. Muratsuchi, Sept. 16, 1991

- Section 106 Consultation
  David J. Herdrich to Steven L. Costa, August 29, 1991

- Section 106 Consultation
  Steven L. Costa to David J. Herdrich, August 29, 1991

- Section 106 Consultation/Recommendations
  Steven L. Costa to Dean C. Allard, September 25, 1991

- Section 106 Consultation/Recommendations
  Dean C. Allard to Steven L. Costa, October 7, 1991

- Coastal Consistency Certification
  (Acknowledgement of Application)
  Lelei Peau to Beth Hussey, August 14, 1991

- Water Quality Certification
  Pati Faiai to Steven Costa, September 27, 1991

- U.S. Coast Guard Review
  Lt. M. S. Swegles to Steve Costa, August 12, 1991

AMERICAN SAMOA GOVERNMENT
PAGO PAGO, AMERICAN SAMOA 96799
DEPARTMENT OF PORT ADMINISTRATION
HARBOR MASTER'S OFFICE

In reply refer to:
MM/ms60
Serial: 160

17 OCT. 1991

To : Mr. Pati Faiai
Executive Director, ASEPA

From : Leroy Ledoux
Director of Port Administration

Subject : Joint Cannery Outfall Project

A meeting was held at my office at 10:00 a.m., Wednesday, October 16, 1991 between officials from both canneries, a representative from Makai Ocean Engineering Inc., a representative from ASEPA and a representative from our Harbor Master's office.

The Enginnering firm of Makai Ocean Inc. was invited to this second meeting held here to clarify some of our concerns regarding the pipeline deployment. Specifically, the issues concerning:

(1). Location of the pipeline in relation to anchorage area #2.
(2). Potential damages to pipeline from dropping or dragging of anchors;
(3). Coordination of the Port during pipeline installation.

In regard to the deployment of the pipeline through part of our designated anchorage area, our concerns were whether the pipeline will remain as designed on the eight (8) fathom barometric line and not fall or slip to the deeper depth of our anchorage area. If this situation does occur, than we cannot guarantee that no damages will be done to the pipeline. However, we were assured by the canneries that we will not be liable for damages and had further assurances from the representative of the Makai Ocean Inc. that the installation of the pipeline will be stalation, i.e.., using anchored pad-eyes for tie-downs as well as anchor collors and flexibility and weight of the pipe itself. With these assurances, we had no further comments on this issue.

We have designated a staging area as well as an area in the water for storage of these floating pipes when joined and plugged. We have requested markings and buoys be placed to designate these areas from vessel traffic and for safety purposes. We will coordinate and monitor all vessel movements during the installation phase of the project and other assistance necessary and required.

We again wish to emphasize the importance of our concerns regaraing the condition of our harbor, and for industries to continue to find solutions to make a cleaner and better environment throughout. This project is another step in solving our water quality standards to be enjoyed by the communities and we look forward to its completion.

Leroy Ledoux

cc: [redacted]
Mr. Maurice Callahan, Star Kist Samoa, Co.
Mr. Faumuina, Director-DPO
Mr. Lelei Peau, C.A.M.P.-DPO
Deputy Port Director
Harbor Master
file

11 SEP 1991

12 SEP 1991

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, Ca. 94105

SEP 3 1991

Lieutenant Colonel James T. Muratsuchi
District Engineer
U.S. Army Corps of Engineers
Honolulu District
Attn: Operations Branch
Building 230
Ft. Shafter, Hawaii 96858-5440

Re: Public Notice Number PODCO 2199 (August 9, 1991), Joint Cannery Outfall Line, Pago Pago Harbor, American Samoa

Dear Lt. Colonel Muratsuchi:

This letter responds to the referenced permit application by Star Kist Samoa and VCS Samoa Packing Company for the construction of a joint cannery outfall pipeline to carry wastewater from the cannery operations located in the inner portion of Pago Pago Harbor to the outer portion of the harbor. The 16-inch polyethylene pipeline will be unburied, with concrete collars used to weight the pipeline. As a result, no excavation or trenching is required for the pipeline construction. In addition, the pipeline will avoid the fringing reefs of Pago Pago Harbor.

These comments have been prepared under the authority, and in accordance with the provisions of the National Environmental Policy Act (42 U.S.C. 4321 et seq.) and Section 309 of the Clean Air Act (42 U.S.C. 1857 et seq.).

Historically, the canneries have discharged fish processing waste in the inner harbor resulting in significant water quality impacts. Although the canneries have reduced their pollutant discharges to the harbor, violations of interim discharge limits established by EPA's administrative order have occurred. The proposed outfall and diffuser was designed to take advantage of the water currents and bathymetry in the harbor. Once constructed, the joint outfall should result in improved water quality within the harbor. Upon establishment of a mixing zone, the discharge through the proposed outfall should not result in exceedances of American Samoa's water quality standards.

Based on the information contained in the public notice and the draft environmental impact statement (DEIS), and the fact that no significant environmental impacts are expected as a result of the outfall construction, the Environmental Protection Agency (EPA) will not object to the issuance of a permit.

Should you have any questions regarding our comments, please contact James Branch at (415) 744-1601.

Sincerely,

Clyde A. Morris
Chief, Wetlands Regulatory Section

cc: ASEPA, American Samoa
USFWS, Honolulu
NMFS, Honolulu
PICO, Honolulu
Applicants

10 SEP 1991

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
300 S. Ferry Street
Terminal Island, CA 90731

September 3, 1991 F/SWR13:JJN

09 SEP 1991

Lieutenant Colonel James T. Muratsuchi
District Engineer
U.S. Army Corps of Engineers
Fort Shafter, Hawaii 96858-5440

Dear Lt. Colonel Muratsuchi:

The National Marine Fisheries Service (NMFS) has reviewed Public Notice No. 2199, Joint Cannery Outfall, Pago Pago Harbor, American Samoa (dated August 9, 1991). The applicants are Star Kist Samoa and VCS Samoa Packing Company. We offer the following comments for your consideration pursuant to the Fish and Wildlife Coordination Act.

Proposed Project

The applicants propose to construct a joint cannery outfall pipeline to carry wastewater from the cannery operations located in the inner portion of Pago Pago Harbor to the outer portion of the harbor. The pipeline will be a 16-inch diameter high density polyethylene pipe. Concrete collars would be used to weight the pipeline which will be unburied, and no excavation or trenching is required for the outfall construction. The pipeline will be located at water depths between 30 feet and 180 feet and will avoid the coral reef fringing the harbor. The proposed construction staging area is Pago Pago Park, an upland area adjacent to the inner harbor.

The proposed joint cannery outfall will replace two existing shorter outfalls for Star Kist Samoa and Samoa Packing Company which are presently discharging into Pago Pago Harbor. The joint outfall is designed to convey wastewater from the canneries to the outer harbor in an effort to improve effluent dilution and water quality within the harbor.

NMFS Comments

NMFS has reviewed the project during development of the draft Environmental Impact Assessment (EIA) which accompanied the permit application. As stated in our comments on the Draft EIA (Appendix A, page A-3,4), NMFS has long been concerned with the poor water quality and degraded benthic habitats within inner Pago Pago Harbor. The two existing tuna canneries have been a major contributor to the problem. We would prefer that no wastewater be discharged into the marine environment, however we

realize that this is not a practical option for the canneries at this time. Consequently NMFS supports the subject project which will remove a major source of pollution from the inner harbor. Effluent dilution and flushing action are much greater in the outer harbor which will serve to improve water quality and aid in restoring fishery habitat throughout the harbor.

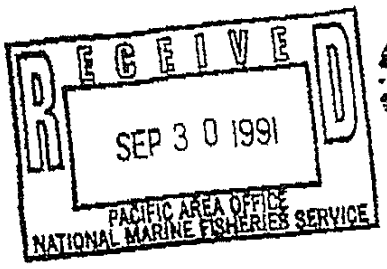
It is our understanding that the proposed 16-inch diameter pipeline will be routed from the existing cannery outfalls to the bottom of the harbor where it will be placed in water depths of 30 to 180 feet. The pipeline will run parallel to the shallow reef flat at the north end of the harbor, ending in a diffuser near Anasosopo Point in 180 feet of water. Therefore the coral reef habitat will be avoided and no trenching will be required.

In light of the above, NMFS concurs with the proposed activity and supports issuance of a permit for the project providing every effort is made to minimize turbidity during pipeline deployment.

Sincerely yours,

E.C. Fullerton
Regional Director

cc: F/SWR13, Naughton
FWS, Honolulu
EPA, Region 9 (E-4)
OMR, Am. Samoa
CZM, Am. Samoa
EPA, Am. Samoa



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
300 South Ferry Street
Terminal Island, California 90731

September 16, 1991 F/SWR33:ETN

Lt. Colonel James T. Muratsuchi
District Engineer
U.S. Army Corps of Engineers
Fort Shafter, HI 96858-5440

Dear Lt. Colonel Muratsuchi:

This concerns the Endangered Species Act coordination requirements for a permit application to construct a cannery outfall pipeline and diffuser at Pago, American Samoa (File No. PODCO 2199). The list of species provided to the consultants who prepared the draft environmental impact assessment (EIA) for the project still remains accurate.

We have reviewed the Public Notice and the draft EIA and find that the project as proposed will not likely affect any listed species found near or around the project site. Critical habitat has not been designated or proposed for any listed species in American Samoa.

This concludes the Section 7 consultation process for this proposed activity. Consultation must be reinitiated if: 1) new information becomes available revealing effects of the project on listed species that were not previously considered; 2) the project is subsequently modified in manner that causes an effect to listed species that was not considered; 3) or if a new species or critical habitat is designated that may be affected by the project. Please contact Mr. Eugene T. Nitta, Pacific Area Office directly (808/955-8831) if you have any further questions.

Sincerely,

E C Fullerton

E. C. Fullerton
Regional Director

cc: F/SWR33 - Nitta
EPA Region 9 (E-4)

AMERICAN SAMOA GOVERNMENT
PAGO PAGO, AMERICAN SAMOA 96799
DEPARTMENT OF PARKS AND RECREATION

In reply refer to:
Serial:245-91

August 29, 1991

Mr. Steven L. Costa
Project Manager
CH2M Hill
6425 Christie Avenue, Suite 500
Emeryville, CA, 94608

Subject: Joint Cannery Outfall, Section 106
"No Property" Determination

Dear Mr. Costa:

Thank you for your letter of July 15, 1991 concerning the joint cannery outfall project proposed by Starkist Samoa, Inc. and Samoa Packing Company. I have read your letter and reviewed the project description and side-scanning radar material you included.

It is my opinion, given the material available, that a "no property" determination, in accordance with 36 CFR Par 800.4 (d), would be appropriate for the project. The documentation you have provided indicates that there are no properties in the project areas and it is unlikely that any properties will be discovered during the implementation of the undertaking.

Although it seems unlikely that any properties will be discovered during the project there is one issue, that of unexploded ordnance, that you may wish to research more thoroughly to ensure that no accidents occur.

I have conducted further research concerning the Japanese attack on Pago Pago Harbor and all preliminary indications are that the shells fell on the Utulei side of the harbor. (I have enclosed three accounts of the attack) None of these accounts, however, are the primary sources; hence, one cannot be certain that a stray shell did not land in the project area.

In addition, there is an account (also enclosed) that target practice involving the 6" guns on Breakers and Blunts Points took place in the harbor area. Again, this raises the potential for unexploded ordnance in the project area.

We, therefore, recommend that additional research be conducted to obtain primary source reports in order to rule out or confirm the presence of unexploded ordnance in the project area.

In that regard, we reccommend that you try to locate the document highlighted on enclosure number -ii-. Mr. Dean C. Allard, Director of the Naval Historical Center in Washington should be able to assist you. His address is below.

Dr. Dean C. Allard, Director
Naval Historical Center
Washington Navy Yard
Washington, DC 20374-5071

In addition, this office is currently conducting a survey of the entire island of Tutuila for unexploded ordnance and hazardous waste. If our contractor recovers any relevant information we will forward it to you.

Sincerely,

David J. Herdrich

David J. Herdrich
Territorial Archaeologist

cc: Norman Wei/Starkist Seafood Company
James Cox/Van Camp Seafood Company
Andrew Resnick/Makai Ocean Engineering
Sheila Wiegman/ASEPA

Engineers
Planners
Economists
Scientists

September 25, 1991

PDX30702.PA.PR

Mr. David J. Herdrich
Territorial Archaeologist
Department of Parks and Recreation
American Samoa Government
Pago Pago, American Samoa 96799

Re: State Historic Preservation Officer Concurrance With No Affected Property Determination for the Joint Cannery Outfall Project, Pago Pago Harbor, American Samoa

Dear Mr. Herdrich;

Thank you very much for your timely and through review of the joint cannery outfall project and any potential impacts on historical and archaeological resources. I have supplied a copy of your letter of August 29, 1991 to Ruby Mizue, U.S. Army Corps of Engineers, Honolulu District, for purposes of providing the documentation of a SHPO determination of "no property affected" in accordance with 36 CFR Part 800.4(d). The COE requires Section 106 coordination for this project under Section 10, of the Rivers and Harbors Act.

If your letter of August 29, 1991 does not suffice for the purpose of SHPO review I would greatly appreciate it if you would send a separate letter or have the State Historic Preservation Officer send a letter directly to the COE on this matter.

I have followed up with a request to Dr. Dean Allard concerning the de-classified document relating to unexploded ordnance in Pago Pago Harbor. I will forward a copy of his response as soon as it becomes available. Thank you very much for the additional documentation on the historical shelling attacks and other naval military activity in Pago Pago Harbor. The safety issue of unexploded ordnance will be passed on to StarKist and Van Camp and the design engineer (Makai Ocean Engineering) for the project. The pipeline route will be flagged with bouys set by divers before the pipeline is placed on the bottom. The

divers will be able to inspect the general condition of the bottom and be able to identify any unexploded ordnance that may pose a safety problem.

If you have any additional comments or concerns regarding the joint cannery outfall project please fell free to contact me.

Sincerely,

CH2M HILL

Steven L. Costa
Project Manager

cc: Ruby Mizue/COE
Lelei Peau/ASCMP
Sheila Weigman/ASEPA
Norman Wei/Starkist Seafood Company
James Cox/Van Camp Seafood Company

Engineers
Planners
Economists
Scientists

September 25, 1991

PDX30702.PA.PR

Dr. Dean C. Allard
Director
Naval Historical Center
Washington Navy Yard
Washington, D.C. 20374-5071

Re: Request For Document Concerning Unexploded Ordnance, Pago Pago Harbor, Tutuila, American Samoa

Dear Dr. Allard;

In the course of obtaining permits for the construction and operation a joint cannery outfall the issue of hazards posed by unexploded ordnance in Pago Pago Harbor, Tutuila, American Samoa has been raised. Mr. David Herdrich, Territorial Archaeologist, Department of Parks and Recreation, American Samoa Government has reviewed the outfall construction project. The project will result in the construction of an 8400 foot long pipeline and diffuser to replace two short wastewater outfalls operated by the tuna canneries in Pago Pago Harbor.

Mr. Herdrich has made the determination that there are no historical or archaeological properties that will be affected by the project. In his review (see attached letter) Mr. Herdrich indicated that there exists the possibility that unexploded ordnance may exist in Pago Pago Harbor. This unexploded ordnance could pose a safety hazard during the physical placement of the outfall pipeline.

Mr. Herdrich is of the opinion that a certain declassified document may help in determining the location of any unexploded ordnance. The document title is as follows:

> Comdt NavSta Tutuila Secret Serial 085 dated 9 February 1942 to Cincpac

Mr. Herdrich indicated that you may be able to help in the location of this document. If this document is available I would like to receive a copy for myself and Mr. Herdrich to review.

CH2M HILL San Francisco Office 6425 Christie Avenue, Suite 500 Emeryville, CA 94608 415.652.2426 Fax 415.652.0482

In our background research for determining the correct position for the outfall we conducted a side-scan sonar trace of harbor bottom in the vicinity of the pipeline route. No large objects other than rock formations were discovered. The contract documents for the project indicate that the pipeline route will be flagged with bouys by divers prior to placement of the pipeline. Although the purpose of the flagging is to facilitate the proper alignment of the pipeline the divers will have the ability to inspect the entire pipeline route for any safety hazards including unexploded ordnance.

Thank you for your time and assistance in this request. If you have any questions concerning the project please contact me at (415) 654-2426 ext 2251.

Sincerely,

CH2M HILL

Steven L. Costa
Project Manager

DEPARTMENT OF THE NAVY
NAVAL HISTORICAL CENTER
WASHINGTON NAVY YARD
WASHINGTON, D.C. 20374-0571

IN REPLY REFER TO

5750
Ser AR/2094
October 7, 1991

Mr. Steven L. Costa
Project Manager
CH2M Hill
6425 Christie Avenue, Suite 500
Emeryville, CA 94608

Dear Mr. Costa:

This replies to your letter of September 25, requesting information concerning unexploded ordnance in Pago Pago Harbor, Tutuila, American Samoa during World War II.

Unfortunately, our Archives does not have the document entitled "Comdt NavSta Tutuila to CINCPAC" (Secret Serial 085) for the February 9, 1942 period among its holdings. Therefore, I suggest that you contact the Military Reference Branch, U.S. National Archives, Washington, DC 20408. That branch may hold more pertinent information concerning this particular document in the collection known as the CINCPAC Flag Files. In addition, you may wish to contact the Naval Facilities Engineering Command-Archives, Port Hueneme, CA 93043. That office may have more information concerning unexploded ordnance at Pago Pago Harbor in its custody.

Your interest in naval history is appreciated and I hope that this information will be helpful to your research.

Sincerely,

Dean C. Allard

DEAN C. ALLARD

U.S. Department
of Transportation

United States
Coast Guard

Commander (oan)
Fourteenth Coast Guard District

Prince Kalanianaole
Federal Building
300 Ala Moana Blvd.
Honolulu, Hawaii 96850-4982
Phone: (808) 541-2315

16500
Serial 32422
12 AUG 1991

Mr. Steve Costa
Project Manager
CH2M Hill
6425 Christie Avenue
Emeryville, CA 94608

Dear Mr. Costa:

I have reviewed your Draft Environmental Impact Assessment for the Joint Cannery Outfall Project in Pago Pago Harbor, American Samoa and find that the project has no impact on the Office of Aids to Navigation areas of interest. We will forward the Draft Environmental Impact Assessment to the USCG Liaison Officer in Samoa for his review. Thank you for providing us with the opportunity to comment on this project.

My point of contact is LT Michael Swegles at (808) 541-2315.

Sincerely,

M. S. SWEGLES
Lieutenant, U. S. Coast Guard
Chief, Short Range Aids
Fourteenth Coast Guard District
By direction of the District Commander

AMERICAN SAMOA GOVERNMENT
PAGO PAGO, AMERICAN SAMOA 96799

ECONOMIC DEVELOPMENT PLANNING OFFICE

In reply refer to:
ECD:
SERIAL # 0490

August 14, 1991

Beth Hussey
Environmental Sciences Department
CH2MHill
6425 Christie Avenue, Suite 500
Emeryville, CA 94608

Dear Ms. Hussey:

This is in response to your letter dated July 15, 1991 (ref: PDX30702.PA.PR) regarding consistency determination for the proposed joint outfall for StarKist Samoa and Samoa Packing in American Samoa.

I have reviewed the project description as contained in Steve Costa's July 15, 1991 Memorandum to File, and the Summary of ... Project Compliance with the ASCMP Objectives, as contained in your letter, and hereby notify you that your consistency request is complete pending receipt of the EIA. Upon receipt of the EIA, a public hearing on the project will be conducted (in coordination with other relevant ASG agencies) and any comments received will be incorporated for our determination of consistency with the ASCMP objectives. Please be assured that we will endeavor to make timely our consistency decision following the public hearing, the date for which will be determined upon receipt of the EIA.

As for permits, I encourage CH2MHill (on behalf of the two canneries) to submit application for a local Land Use/Building Permit at this office in conjunction with submittal of the EIA. All federal permit applications may be submitted at the same time, and should be done so as soon as possible in order to allow for adequate processing time.

If you have any questions concerning the above please feel free to contact Richard Volk of my staff at 684-633-5155.

Sincerely,

Richard Volk

for Lelei Peau
ASCMP Manager

cc: Richard Volk, Environmental Planner, ASCMP
Pati Fai'ai, Director, ASEPA

AMERICAN SAMOA GOVERNMENT
PAGO PAGO, AMERICAN SAMOA 96799

In reply refer to:

OFFICE OF THE GOVERNOR
ENVIRONMENTAL PROTECTION AGENCY

Serial: 406

September 27, 1991

Steven Costa
CH2M Hill
6425 Christie Avenue
Emeryville, California 94608

Dear Mr. Costa:

I have reviewed your request for water quality certification for construction of the joint cannery outfall located in the outer portion of Pago Pago harbor. This project is consistent with the protected uses for Pago Pago harbor as provided for in the American Samoa Water Quality Standards. This project is also in compliance with sections 301,302,303,306, and 307 of the Clean Water Act, and certification is hereby given.

Every effort should be made to reduce turbidity in Pago Pago Harbor during construction of the outfall. Efforts should be made to minimize any soil erosion in Pago Pago Park as a result of the land construction phase.

Sincerely,

Pati Faiai, Executive Secretary
Environmental Quality Commission

cc: Pat Young, ASEPA
Environmental Coordinator, ASEPA
Enforcement Branch, ASEPA
Maurice Callaghan, Star Kist Samoa
Michael macready, Samoa Packing